

SUMMARY

Monday, July 25, 2005

Revised: July 28, 2005

Revised: August 9, 2005



Homes and Restaurants Workgroup Meeting

Held: July 13, 2005

Meeting Location/Address:

NJDEP Headquarters Building, 401 E. State St., Trenton, NJ

Meeting called by: Ray Papalski

Co-Facilitators: Sandra Cohen, Laura Scatena

Attendees:

State Team Members:

1. Ray Papalski, Workgroup Leader, New Jersey Department of Environmental Protection (NJDEP), Division of Air Quality Planning (DAQ), Bureau of Air Quality Planning (BAQP)
2. Sandra Cohen, Co-Facilitator, NJDEP DAQ BAQP
3. Laura Scatena, Co-Facilitator, NJDEP DAQ BAQP
4. Frank Matula, NJDEP, DAQ, Bureau of Technical Services
5. Jim Scarvalli, NJDEP, Division of Compliance and Enforcement (DCE), Minor Source Compliance Investigation
6. Tom Pitcherello, New Jersey Department of Community Affairs (NJCA)

Participants:

1. Adeline Arnold, Aberdeen Township Environmental and Shade Tree Advisory Board (by phone)
2. Laurence Bernson, R&D Council of NJ
3. Kenneth Fradkin, USEPA Region 2 (by phone)
4. Amy Frank, NJDCA
5. Anne Leimbach, Mid-Atlantic Hearth, Patio & Barbecue Association (HPBA) (by phone)
6. Gabriella Munoz, NY Academy of Sciences (by phone)
7. Vince Patram, Specialty Chemical Catalysts Engelhard Corporation
8. Dawn Prandi, Somerset County Health Department (by phone)
9. Kety Rosario, NJDEP DCE
10. Arnold Schmidt, Union County Health Department
11. Rich Vaccaro, Madison-Vector
12. Tina Walling, Aberdeen Township Environmental and Shade Tree Advisory Board (by phone)
13. Jerry Woodward, Hearth and Home Technologies (by phone)

Materials:

1. Name tag (*Please bring to the next meeting*)
2. Attendance sign-in sheet
3. Last meeting summary (6-29-05), pdf file available at http://www.nj.gov/dep/airworkgroups/home_restaurant_workgroup.html
4. Agenda, pdf file available at http://www.nj.gov/dep/airworkgroups/home_restaurant_workgroup.html
5. USEPA standards: New residential wood heaters, <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=c59f307b39a9d33d324266d576e01864&rgn=div6&view=text&node=40:6.0.1.1.1.63&idno=40>

Introduction/Announcements

- Since the meeting also incorporated a conference call for those who could not be in Trenton, all participants introduced themselves.
 - There were a couple of announcements regarding the workgroup webpage. Updates for the meeting time, minutes, and agenda had not been posted in time for the meeting. It was explained that the NJDEP would work diligently to see that the process for updates becomes quicker. Since computer technology would primarily be used for communication, it was suggested to the participants that they check the website regularly for updates, especially the day before a meeting.
 - The participants were asked if the NJDEP could post the workgroup participants on the webpage and the workgroup unanimously agreed that it would be okay to list the affiliations only of the participants on the webpage.
 - It was also requested that the contact information for all the participants be emailed to everyone in the group. *(Emailed July 14, 2005)*
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Overview

- No one provided additions/corrections on the minutes of the previous meeting or on the current agenda.
 - The outreach assignments from the previous meeting were completed but it was decided that more outreach needed to be done since the workgroup still lacks representation from the Department of Health and homebuilders/construction companies and related trade associations. The topic of reducing emissions from indoor woodburning from wood stoves and fireplaces was introduced as the main discussion focus of this meeting.
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Discussion:

Reducing emissions from indoor woodburning (i.e., wood stoves and fireplaces)

Topic 1: Current USEPA standards (Subpart AAA - Standards for Performance of New Residential Wood Heaters)

Discussion:

- The existing federal (USEPA) standards were discussed at length as a possible control strategy for indoor woodburning. Several key points were made during the discussion:
 - 1) While the federal standards require the subject appliances to achieve a certain level of combustion efficiency to minimize emissions, the performance standards apply only to new or replacement controlled combustion appliances (e.g. wood stoves); they do not apply to fireplaces, existing wood stoves or other indoor woodburning appliances expressly exempted in the standards. The Hearth Industry is already required to comply with the USEPA standards but fireplaces are not. Fireplace inserts are certified by the USEPA and meet the same standards as wood stoves.
 - 2) There was confusion over the difference between fireplaces and wood stoves (see Topic 2 below) that needs to be addressed in order to develop effective control strategies (see recommendations below).
- Suggestions:
 - 1) All licensed contractors and manufacturers should be trained to comply with the current standards. DCA does not currently require a licensed contractor for installing a wood stove; however, as of January 2006, all Home Improvement Contractors operating in New Jersey will be required to register with DCA. The registration process could be used to educate this group about compliance with the federal standards.
 - 2) It was suggested that a more direct and effective approach to implement the federal standards for all new construction would be for DCA to include them in their code requirements. However, the requirements would only apply to new and replacements of controlled combustion appliances, which may require local permits.
- After deciding that the USEPA standards should be implemented in the DCA code, the stringency of the standards was discussed. It was determined that the standards are set and not much else could be done to change the federal standards at the moment. However, Washington and Colorado have adopted state standards and these should be investigated.
- It was stated that the National Fireplace Institute (NFI) has a training program for proper installation and operation of new and existing fireplaces.
- The data for the number of existing woodburning units sold in New Jersey was requested but it was agreed that this data would not be useful in developing effective control measure(s).

Conclusion:

- Recommendation: DCA should revise the Uniform Construction Code to cross-reference the current federal
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standards and require compliance for all new and replacement wood stoves (except those exempted in the standards) and fireplace inserts. Under this recommended control strategy, all dealers would be required to sell USEPA-compliant units and the federal performance standard would be enforceable by DCA statewide. The requirements would address only new and replacement controlled combustion units, which require local permits.

- Washington and Colorado standards should be investigated further.

Action Items/Person(s) responsible/Deadline:

1. What is the USEPA efficiency standard?
 - Assigned to: [Ray](#) (completed)
 - *The USEPA standards for wood stoves (and fireplace inserts) are 7.5 grams of smoke per hour for non-catalytic stoves and 4.1 grams of smoke per hour for catalytic stoves.*
 2. Training requirements for fireplace installation and replacement
 - Assigned to: [Anne, HPBA](#)
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Topic 2: Woodburning efficiency: Differences between residential woodburning appliances

Discussion:

- Since the existing federal standards apply only to “controlled combustion appliances”, the differences between wood burning stoves and fireplaces were discussed at length. The differences discussed fell into 3 categories:
 - Fuel type
 - Free standing vs. installed
 - Efficiency (i.e. emissions)
- These differences were expanded upon as follows: Not all controlled combustion appliances burn traditional firewood (e.g. logs and tinder). Some are designed to use compressed wood pellets. Fireplaces are installed into the infrastructure of the house whereas woodburning stoves can be freestanding. Woodburning stoves generally burn more efficiently than fireplaces.
- It was suggested that an effective control strategy would need to define the regulated appliance(s) in terms of ‘site-built’ or ‘manufactured’ and whether the emissions would be affected.
 - Currently, new residential construction for installing fireplace inserts or woodburning stoves must comply with the federal performance standards.
 - Open masonry fireplaces constructed on site are specifically exempted.
 - Factory built fireplaces though not technically exempt are not wood heaters as defined in the regulation (i.e. air-to-fuel ratios much higher than 35-to-1, high burn rates, etc).
 - Fireplace inserts are essentially wood heaters that have been adapted to fit into fireplaces. The USEPA regulates the inserts as wood heaters and certifies these units. The following link provides some additional clarification (<http://www.epa.gov/woodstoves/fireplaces.html>).
 - Fireplaces are outside the scope of the USEPA rules. It was suggested that inserts be required so that fireplaces comply with the USEPA rules.

This section above required further clarification through email communication and reflects revisions made by the workgroup members.

- The question of regulating antique stoves was raised and it was stated that antique stoves are illegal to sell at a dealership level. Person-to-person sales of antique stoves were thought not to be a significant issue within the State.
 - Questions were raised about promoting woodstoves over fireplaces. A Canadian study was cited that evaluated dioxin emissions comparing conventional and certified stoves. It showed that dioxins are higher in certified stoves even though other pollutants are lower compared to conventional stoves. The study found that gas-burning stoves resulted in the lowest emissions. The general response from the group was to focus the recommendations on the reduction of particulate emissions and not other toxics or hazards at this time, although the concern would be mentioned in the report.
 - Options for switching from a woodburning unit to a gas-fueled unit were debated. Rough figures from industry were as follows:
 - Total cost to switch is about \$1500 minimum
 - Cost depends on efficiency
 - Gas logs: 10% heat efficiency (\$1500)
 - Vent-free: 100% heat efficiency
 - Insert and blower: 80-85% heat efficiency
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- Conclusion: It was decided by the group to wait for the USEPA to propose new standards for fireplaces and existing appliances since DCA does not have the authority to enforce construction codes that are not based on state or federally-promulgated standards. Washington State and Colorado standards for fireplaces and their certification should be investigated.
 - Potential Recommendation: New Construction - Fireplaces & Existing Wood Stoves/Fireplaces: (1) Adopt USEPA rules under NJDEP then adopt into DCA code.
 - Recommendation: New Construction - Fireplaces & Existing Wood Stoves/Fireplaces: (2) Restriction on wood burning sources: Ban and/or require inserts/fireplaces with specific efficiency
 - Depending on: #/type of new units and #/type of appliance/fuel source
 - Industry opposes: no significant environmental benefit; diminishing return

Action Items/Person(s) responsible/Deadline:

1. Fireplaces: Shift from woodburning to gas fireplace – can we get numbers (trends)? [Jerry](#)
 2. Fireplaces: Options and costs for improving efficiency of existing units [Jerry](#)
 3. New wood stoves: Future development restriction based upon a certain number of units (fuel type, construction; e.g., more than 5 or 10 home construction units must install gas fireplaces) [Anne, HPBA](#)
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Topic 3: Neighbor issues/complaints

Discussion:

- Federal regulations do not address stack height or distance from one home to the next in relation to the location of a fireplace.
- Subchapter 5 is the state regulation that addresses general air pollution complaints.
- # of units and distance between homes: there are local codes for this, as well as DCA codes, but they are for fire prevention and safety, not for the control of particulates.
- Local health code vs. statewide uniform code for municipalities
- Nuisance codes: who enforces?
- Concerned that we're not controlling a perceived nuisance in the workgroup
- Members wanted to keep focus on the PM problem and decided that someone needs to address the issue

Conclusion: The work group agreed by consensus to expand their "mission" to also address localized "neighbor-to-neighbor" health and aesthetic-related air quality issues from residential woodburning. Topic for future agenda/meeting.

Action Items/Person(s) responsible/Deadline: None

Topic 4: Wood pellet stoves

Discussion:

- More efficient than USEPA-approved wood stoves; less polluting; cheaper than propane and natural gas
- Current federal energy bill (House) includes rebate program for pellet stoves
- Burns compressed wood by-products
- More common in northern and southern NJ
- Renewable energy resource
- MD and DE: large sales (\$150/ton; about 3 tons/season in NJ)
- There are current standards for clean wood content within the "pellets"

Conclusion: Since not everyone was familiar with wood pellet stoves, it was decided that information about them needed to be obtained and shared with the group.

Action Items/Person(s) responsible/Deadline:

1. Wood-pellet stoves info
 - Assigned to: [NJDEP](#)
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Topic 5: Existing wood stoves/fireplaces

Discussion:

- Change-out program (with USEPA or a regional planning organization?) to replace existing woodstoves and fireplace inserts.
 - There were many options discussed about how a change-out program could be done. This was discussed in great detail at the last meeting as well. The recommendations, as listed below, would need more research
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but the consensus of the group was to recommend a state or regional woodstove and fireplace insert change-out program.

- Infrastructure and/or service needs to be available in a given area in order to successfully complete a change-out program. It was suggested that the utility companies (e.g. PSE&G) be contacted to assess their interest in participating or funding a change-out program to convert from woodburning appliances to natural gas.

Websites for more information

- www.epa.gov/woodstoves, links to HPBA site on change-outs.
- Pellet Fuel Institute (PFI) website

Conclusion:

Potential Recommendation: Existing Fireplaces & Existing Wood Stoves: (4) Investigate a potential tax rebate and/or industry discount for higher efficiency unit and/or USEPA-sponsored exchange program and/or utility company rebate

Action Items/Person(s) Responsible/Deadline:

1. NJDEP to approach USEPA regarding making NJ the (or part of the) next focus of change-out pilot program
 - What would NJ have to do?
 - What would scope of the program be?
 - Assigned to: Ray/Anne
2. Additional websites to review - areas that currently change-out units in real estate before the transaction is made
 - Assigned to: NJDEP
3. Reach out to BPU/utility companies regarding rebate program
 - Information on HPBA website/Hearth and Home website (not assigned – will be posted on the web)
4. Overlay non-attainment areas w/ utility franchise areas to focus incentive programs (high PM and available gas lines)
 - Assigned to: Ray (Ray contacted BPU for the information to be mapped.)

Topic 6: General Brainstorming/Additional strategies

Discussion:

- The group was reminded of the ground rules and that all ideas would be considered. Therefore, the group was asked to not exclude an idea right away and to think of any other ideas that the group could consider for reducing emissions from indoor woodburning.
- The following ideas were suggested and discussed:

New Wood Stoves

- Decrease non-retail sale of units (individual to individual); quantify qualitatively by looking at the classified ads – the group decided that this practice was an insignificant source of emissions and the potential benefit was not worth the cost (i.e. tremendous work effort) that would be required to track the transactions.

Existing and New Wood Stoves/Fireplaces

- Require that an existing wood stove/fireplace be changed to a certified unit before the sale of the home. *(see action item under discussion for change-out programs)*

Fireplaces

- Education and outreach
 - Brochures to handout with a retail or home purchase on the benefits of changing to an USEPA-certified wood stove or fireplace insert
 - Should explain the benefits of certified units
 - Should include outreach to developers and realtors

There was a lot of overlap between new and existing wood stoves and fireplaces when discussing additional strategies. Some topics may also be covered under other topics.

Conclusion: The following ideas will be considered and researched. A final screening of ideas will be done at the last meeting.

- Potential Recommendation: New Construction - Fireplaces & Existing Wood Stoves/Fireplaces: (3) Education and Outreach to promote better alternatives
 - Health and environmental impacts
 - Potential Recommendation: New Construction - Fireplaces & Existing Wood Stoves/Fireplaces: (5) Require
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replacement of older fireplaces upon sale of residential (commercial) property (i.e., lead)

Action Items/Person(s) responsible/Deadline:

1. USEPA and institute literature on benefits of cleaner burning alternatives
 - Assigned to: [NJDEP](#)
 2. Education and outreach: From whom? To whom? What is the message?
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Wrap-up

- The recommendations (see conclusions in the discussion) were summarized with the group.
- Homework assignments were assigned to clarify any issues discussed in the meeting (see action items in the discussion).
- Future agenda items were discussed for the next meeting on outdoor wood burning:
 - (1) Residential open burning
 - (2) Fire pits/chimeneas
 - (3) Prescribed burning
 - (4) Burning by permit
- Future meeting logistics were discussed. It was decided to continue to meet every 2 weeks on Wednesdays at the same time and place (NJDEP Headquarters Building) with the option of the conference call phone-in.
- All information will be posted on the Homes and Restaurants Workgroup website at http://www.state.nj.us/dep/airworkgroups/home_restaurant_workgroup.html

The Next HR Workgroup Meeting is Wednesday, July 27, 10 AM at NJDEP in Trenton. Room location and conference call logistics will be provided on the HR website (see calendar links) and in the meeting agenda.
